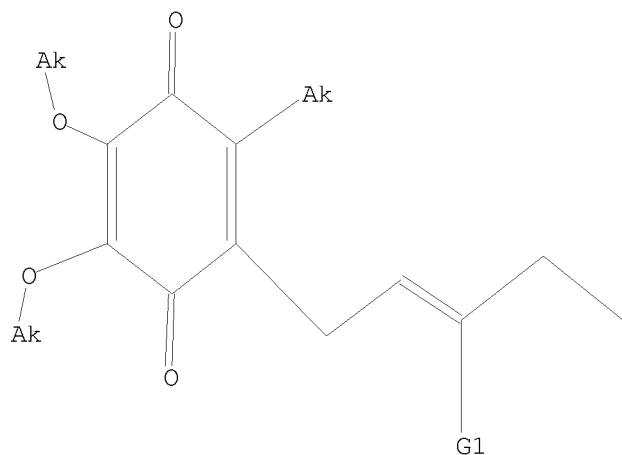


L1 STRUCTURE UPLOADED

=> d L1

L1 HAS NO ANSWERS

L1 STR



G1 Me,Et,n-Pr,i-Pr,n-Bu,i-Bu,s-Bu,t-Bu,H

Structure attributes must be viewed using STN Express query preparation.

=> s L1 SSS SAM

SAMPLE SEARCH INITIATED 20:50:03 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 36 TO ITERATE

100.0% PROCESSED 36 ITERATIONS

19 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 360 TO 1080

PROJECTED ANSWERS: 119 TO 641

L2 19 SEA SSS SAM L1

=> d scan L2

L2 19 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN

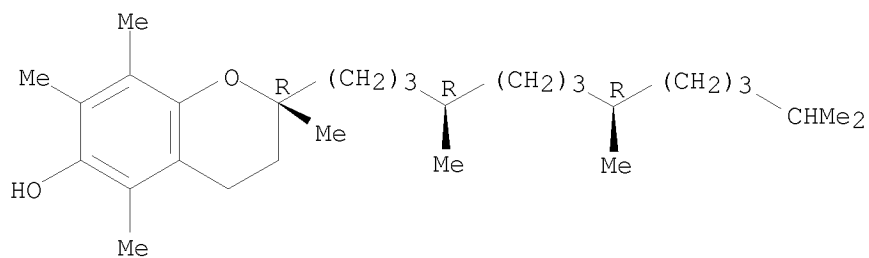
IN 2,5-Cyclohexadiene-1,4-dione, 2-(3,7,11,15,19,23,27,31,35,39-decamethyl-2,6,10,14,18,22,26,30,34,38-tetracontadecaenyl)-5,6-dimethoxy-3-methyl-, (all-E)-, mixt. with [2R\*(4R\*,8R\*)]-3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-1-benzopyran-6-ol (9CI)

MF C59 H90 O4 . C29 H50 O2

CI MXS

CM 1

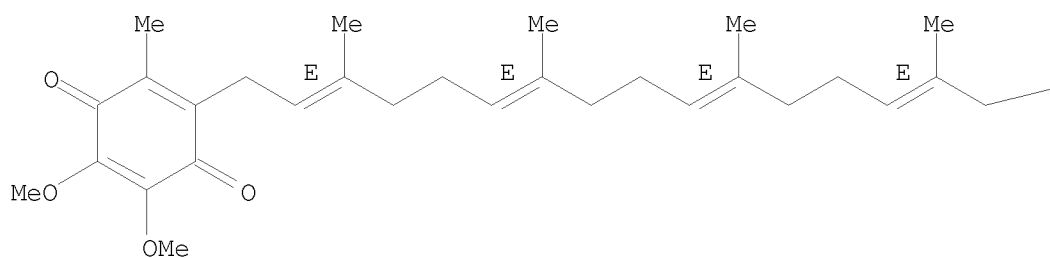
Relative stereochemistry.



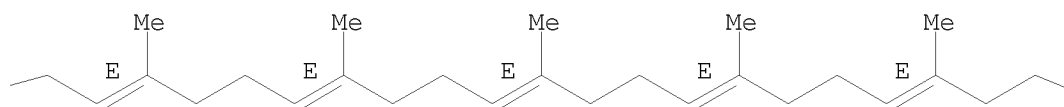
CM 2

Double bond geometry as shown.

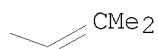
PAGE 1-A



PAGE 1-B

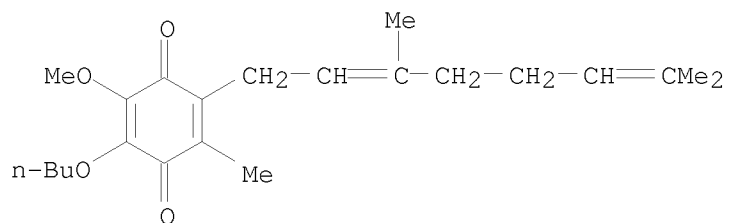


PAGE 1-C



HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):3

L2 19 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN  
 IN 2,5-Cyclohexadiene-1,4-dione, 2-butoxy-5-(3,7-dimethyl-2,6-octadienyl)-3-  
 methoxy-6-methyl- (9CI)  
 MF C22 H32 O4

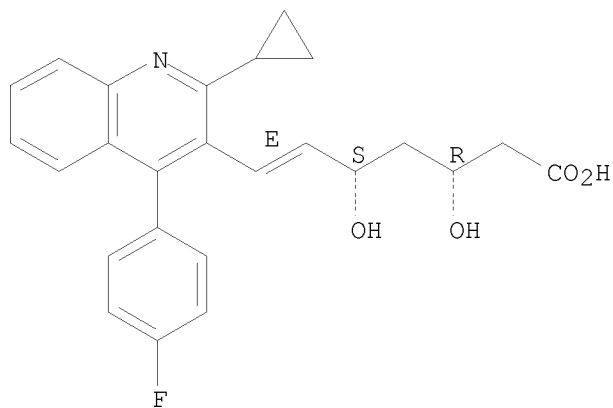


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L2 19 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN  
IN INDEX NAME NOT YET ASSIGNED  
MF C59 H90 O4 . C31 H52 O3 . C25 H24 F N O4 . 1/2 Ca  
CI MXS

CM 1

Absolute stereochemistry. Rotation (+).  
Double bond geometry as shown.

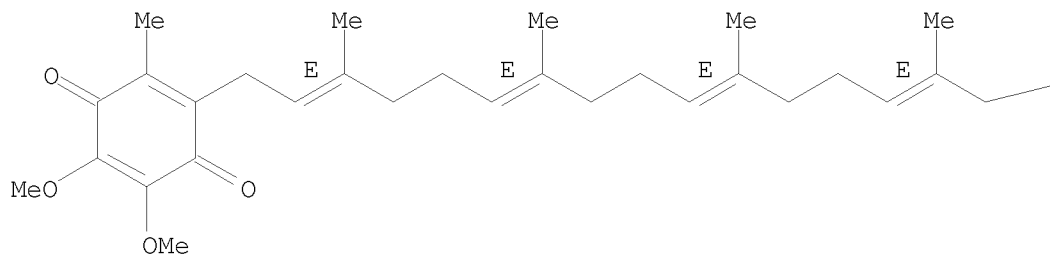


● 1/2 Ca

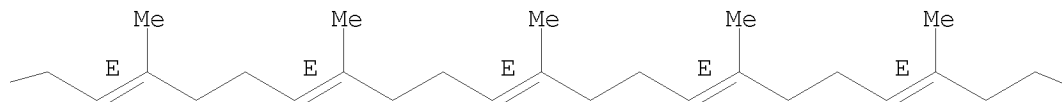
CM 2

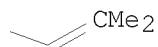
Double bond geometry as shown.

PAGE 1-A



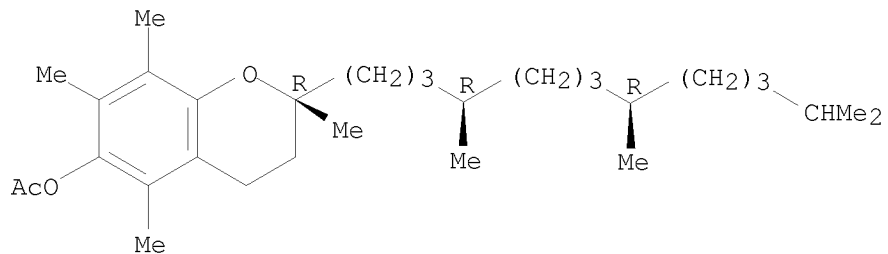
PAGE 1-B





CM 3

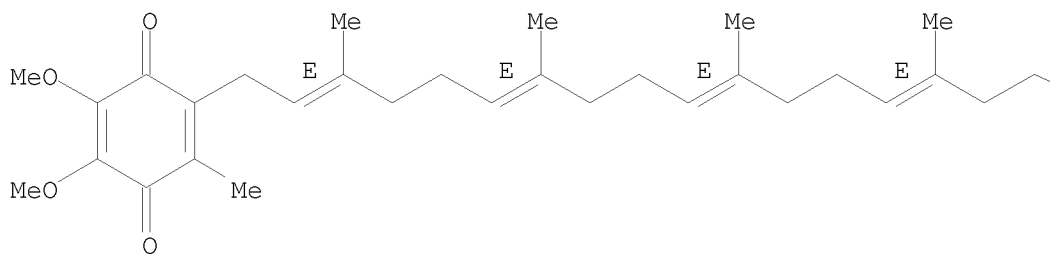
Absolute stereochemistry.



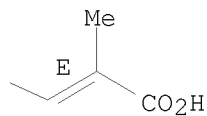
L2 19 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN  
 IN 2,6,10,14,18-Eicosapentaenoic acid, 20-(4,5-dimethoxy-2-methyl-3,6-dioxo-  
 1,4-cyclohexadien-1-yl)-2,6,10,14,18-pentamethyl-, (all-E)- (9CI)  
 MF C34 H48 O6

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=&gt; d his

(FILE 'HOME' ENTERED AT 20:49:06 ON 07 MAY 2008)

FILE 'REGISTRY' ENTERED AT 20:49:18 ON 07 MAY 2008  
L1 STRUCTURE UPLOADED  
L2 19 S L1 SSS SAM

=> s L1 SSS FULL  
FULL SEARCH INITIATED 20:50:33 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 719 TO ITERATE

100.0% PROCESSED 719 ITERATIONS 371 ANSWERS  
SEARCH TIME: 00.00.01

L3 371 SEA SSS FUL L1

=> file caplus, casreact, beilstein  
COST IN U.S. DOLLARS

	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	178.82	179.03

FILE 'CAPLUS' ENTERED AT 20:50:47 ON 07 MAY 2008  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'CASREACT' ENTERED AT 20:50:47 ON 07 MAY 2008  
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT  
COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'BEILSTEIN' ENTERED AT 20:50:47 ON 07 MAY 2008  
COPYRIGHT (c) 2008 Beilstein-Institut zur Foerderung der Chemischen Wissenschaften  
licensed to Beilstein GmbH and MDL Information Systems GmbH

=> s L3  
L4 6145 L3

=> s L4 (P) (synthe? or prepar?)  
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH  
FIELD CODE - 'AND' OPERATOR ASSUMED 'L5 (P) '  
L5 580 L4 (P) (SYNTHE? OR PREPAR?)

=> s L5 (P) (solanesol?)  
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH  
FIELD CODE - 'AND' OPERATOR ASSUMED 'L9 (P) '  
L6 17 L5 (P) (SOLANESOL?)

=> dup rem L6  
DUPLICATE IS NOT AVAILABLE IN 'BEILSTEIN'.  
ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE  
PROCESSING COMPLETED FOR L6  
L7 15 DUP REM L6 (2 DUPLICATES REMOVED)

=> s L7 NOT pd>20010419  
L8 0 L7 NOT PD>20010419

=> s solanesol  
L9 492 SOLANESOL

=> s L9 and (ubiquinone or ubisemiquinone or CoQ10 or (coenzyme(2A)Q(2A)10) or  
ubidecarenone)  
L10 48 L9 AND (UBIQUINONE OR UBISEMIQUINONE OR COQ10 OR (COENZYME(2A)  
Q(2A) 10) OR UBIDECARENONE)

=> s L10 and isodecaprenol  
L11 4 L10 AND ISODECAPRENOL

=> d L11 1-4 TI AB IBIB HITSTR

L11 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Process for the preparation of ubihydroquinones and ubiquinones  
AB A process was disclosed for the preparation of coenzymes CoQ9 and CoQ10  
I {R = [CH<sub>2</sub>C:C(Me)CH<sub>2</sub>]nH-(all-E), n = 9, 10, resp.}, and their related  
ubihydroquinones II (R<sub>1</sub>, R<sub>2</sub> = OH, OMe) via condensation reactions of  
corresponding isoprenols HO[CH<sub>2</sub>C:C(Me)CH<sub>2</sub>]nH-(all-E) (n = 9, 10) and  
hydroquinones III in the presence of 0.005 - 1.0 mol% of a catalyst which  
is a Broensted-acid, a Lewis-acid from the group consisting of a derivative of  
Bi or In or an element of group III of the periodic table of the elements,  
a heteropolyacid, an NH- or a CH-acidic compound, and optionally oxidizing  
the ubihydroquinone obtained. Thus, CoQ10 was prepd with 47.4%  
yield by refluxing of 2,3-dimethoxy-5-methylhydroquinone III (R<sub>1</sub> = R<sub>2</sub> =  
OH) with isodecaprenol and Sc(OSO<sub>2</sub>CF<sub>3</sub>)<sub>3</sub> in n-hexane and  
nitromethane followed by oxidation of the heptane phase of the reaction mixt  
with Ag<sub>2</sub>O.

ACCESSION NUMBER: 2007:171912 CAPLUS  
DOCUMENT NUMBER: 146:229489  
TITLE: Process for the preparation of ubihydroquinones and  
ubiquinones  
INVENTOR(S): Aquino, Fabrice; Bonrath, Werner; Bohrer, Patrick;  
Hugentobler, Max; Netscher, Thomas; Radspieler,  
Alexander  
PATENT ASSIGNEE(S): DSM IP Assets B.V., Neth.  
SOURCE: PCT Int. Appl., 20pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007017168	A1	20070215	WO 2006-EP7645	20060802
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
EP 1915333	A1	20080430	EP 2006-776559	20060802
R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR			
KR 2008033533	A	20080416	KR 2008-705736	20080307
PRIORITY APPLN. INFO.:			EP 2005-17374	A 20050810
			WO 2006-EP7645	W 20060802

OTHER SOURCE(S): MARPAT 146:229489  
REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2008 ACS on STN

TI Preparation of isoprenoid derivatives such as coenzyme Q10 from hydroquinones and prenyl alcohols

AB Isoprenoid derivs. I (R1 = lower alkyl; R2 = H, lower alkyl; n ≤ 10) such as CoQ10, useful for treatment of cardiac infarction, etc., are prepared by treating hydroquinones II (X = pH; R1, R2 = same as above) with R3(CH2CH:CMech2)n-1H [R3 = CMe:CHCH2OH, CMe(OH)CH:CH2; n = same as above] in the presence of sulfolane and Lewis acids and oxidizing the resulting II [X = (CH2CH:CMech2)nH; R1, R2, n = same as above]. Thus, BF3-Et2O was added dropwise to a mixture of decaprenyl alc., 2,3-dimethoxy-5-methylhydroquinone, sulfolane, and hexane at 45° over 30 min and the reaction mixture was further stirred at 45° for 10 min. After removing the solvent from the reaction mixture, the oily residue was treated with Ag2O in ether for 3 h to give 72.1% CoQ10

ACCESSION NUMBER: 2007:54433 CAPLUS

DOCUMENT NUMBER: 146:142855

TITLE: Preparation of isoprenoid derivatives such as coenzyme Q10 from hydroquinones and prenyl alcohols

INVENTOR(S): Yamane, Hiroyuki

PATENT ASSIGNEE(S): J Farumatekku K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2007008886	A	20070118	JP 2005-193266	20050701
PRIORITY APPLN. INFO.:			JP 2005-193266	20050701
OTHER SOURCE(S):	CASREACT 146:142855; MARPAT 146:142855			

L11 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2008 ACS on STN

TI Synthesis of coenzyme Q10, ubiquinone

AB Processes for the stereospecific synthesis of coenzyme Q10 (all E isomer), ubiquinone, are disclosed based on a semisynthetic procedure using solanesol derived from tobacco waste as the starting material.

The process of the invention results in high yields of isometrically useful compns. containing the optically pure isomers. Compns. containing coenzyme

Q10 can be used for treating impaired or damaged tissue in humans and animals. The synthesis of coenzyme Q10 starting from solanesol is described. Solanesol in turn was obtained from tobacco dust and converted to solanesylacetone by a series of steps. The solanesylacetone was subjected to Grignard reaction with vinyl magnesium bromide and the isodecaprenol obtained was converted to E-coenzyme Q10 in a series of steps.

ACCESSION NUMBER: 2002:814893 CAPLUS

DOCUMENT NUMBER: 137:316103

TITLE: Synthesis of coenzyme Q10, ubiquinone

INVENTOR(S): West, Daniel David

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 7 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20020156302	A1	20021024	US 2001-837320	20010419
US 6686485	B2	20040203		
US 20040151711	A1	20040805	US 2003-700424	20031105
PRIORITY APPLN. INFO.:			US 2001-837320	A3 20010419

L11 ANSWER 4 OF 4 CASREACT COPYRIGHT 2008 ACS on STN

TI Preparation of isoprenoid derivatives such as coenzyme Q10 from hydroquinones and prenyl alcohols

AB Isoprenoid derivs. I (R1 = lower alkyl; R2 = H, lower alkyl; n ≤ 10) such as CoQ10, useful for treatment of cardiac infarction, etc., are prepared by treating hydroquinones II (X = pH; R1, R2 = same as above) with R3(CH2CH:CMech2)n-1H [R3 = CMe:CHCH2OH, CMe(OH)CH:CH2; n = same as above] in the presence of sulfolane and Lewis acids and oxidizing the resulting II [X = (CH2CH:CMech2)nH; R1, R2, n = same as above]. Thus, BF3-Et2O was added dropwise to a mixture of decaprenyl alc., 2,3-dimethoxy-5-methylhydroquinone, sulfolane, and hexane at 45° over 30 min and the reaction mixture was further stirred at 45° for 10 min. After removing the solvent from the reaction mixture, the oily residue was treated with Ag2O in ether for 3 h to give 72.1% CoQ10

ACCESSION NUMBER: 146:142855 CASREACT  
 TITLE: Preparation of isoprenoid derivatives such as coenzyme Q10 from hydroquinones and prenyl alcohols  
 INVENTOR(S): Yamane, Hiroyuki  
 PATENT ASSIGNEE(S): J Farumatekku K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 6pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007008886	A	20070118	JP 2005-193266	20050701
PRIORITY APPLN. INFO.:			JP 2005-193266	20050701
OTHER SOURCE(S):	MARPAT 146:142855			

=> d his

(FILE 'HOME' ENTERED AT 20:49:06 ON 07 MAY 2008)

FILE 'REGISTRY' ENTERED AT 20:49:18 ON 07 MAY 2008

L1 STRUCTURE UPLOADED  
 L2 19 S L1 SSS SAM  
 L3 371 S L1 SSS FULL

FILE 'CAPLUS, CASREACT, BEILSTEIN' ENTERED AT 20:50:47 ON 07 MAY 2008

L4 6145 S L3  
 L5 580 S L4 (P) (SYNTHE? OR PREPAR?)  
 L6 17 S L5 (P) (SOLANESOL?)  
 L7 15 DUP REM L6 (2 DUPLICATES REMOVED)  
 L8 0 S L7 NOT PD>20010419  
 L9 492 S SOLANESOL  
 L10 48 S L9 AND (UBIQUINONE OR UBISEMIQUINONE OR COQ10 OR (COENZYME(2  
 L11 4 S L10 AND ISODECAPRENOL

=> d que L10

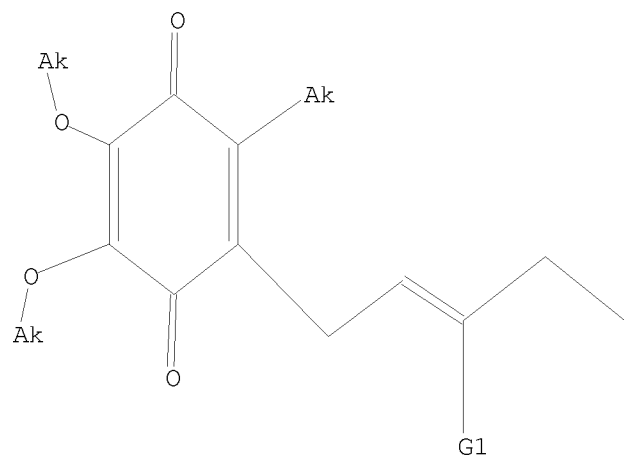
L9 492 SEA SOLANESOL

L10 48 SEA L9 AND (UBIQUINONE OR UBISEMIQUINONE OR COQ10 OR (COENZYME (2A) Q(2A) 10) OR UBIDECARENONE)

=> d L1

L1 HAS NO ANSWERS

L1 STR



G1 Me,Et,n-Pr,i-Pr,n-Bu,i-Bu,s-Bu,t-Bu,H

Structure attributes must be viewed using STN Express query preparation.